

## REMARKS

### I. Introduction

In response to the Office Action dated April 19, 2004, claims 1 and 27 have been amended. Claims 1-40 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

### II. Claim Amendments

Applicants' attorney has made amendments to the claims as indicated above. These amendments were made solely for the purpose of clarifying the language of the claims, and were not required for patentability or to distinguish the claims over the prior art.

### III. Prior Art Rejections

On page (1) of the Office Action, claims 1-40 were rejected under 35 U.S.C. §103(a) as being unpatentable over Richton, U.S. Patent No. 6,650,902 (Richton) in view of Mayraz, U.S. Publication No. 2003/0105826 A1 (Mayraz).

Specifically, the independent claims were rejected as follows:

As per claims 1, 15 and 27:

Richton discloses a system providing location based service information to a wireless mobile unit comprising:

storing a compact definition of a schema (simple commands) of an external database (fig. 3, #305, location based preferences), wherein the external database comprises a user's profile information (the preferences users) (col. 3, lines 23-27);

storing data source information (location based server, fig. 3, #302) that describes how to connect and communicate with the external database (location based preferences translates and cooperates with the location based service database to permit simple commands to be transmitted to) col. 3, lines 39-43); and

storing positional information (GIS or GSP) for the record in the external database as a geocoding index (col. 4, lines 15-27);

providing access (to/from WSC, fig. 3, # 220) to the user's profile information using the stored compact definition, data source information, and positional information (Fig. 3, # 320, Internet, # 340, other sources, external information sources, col. 4, lines 52-65).

Richton does not explicitly teach storing a structured query language (SQL) statement that, upon execution, extracts properties from the external database corresponding to the compact definition and storing a foreign key that identifies a record in the external database. However, Mayraz teaches the system stores user profiles corresponding to user's characteristics. Mayraz teaches storing a structured query language (SQL) statement that, upon execution, extracts properties from the external database corresponding to the compact definition (determination of which user profiles match to the target profiles is implemented by SQL statement), (§0163) and storing a foreign key (user table and user contact data table) that identifies a record in the external database (§0149-0152). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

combine the teachings of the cited references to implement the step of storing a structured query language (SQL) statement that, upon execution, extracts properties from the external database corresponding to the compact definition and storing a foreign key that identifies a record in the external database because it enable verification of matching when place names are included in the target profiles faster and more accurate ¶(0213).

Applicants traverse the above rejection for one or more of the following reasons:

- (1) Neither Richton nor Mayraz teach, disclose or suggest a compact definition of a schema of an external database;
- (2) Neither Richton nor Mayraz teach, disclose or suggest data source information that describes how to connect and communicate with an external database;
- (3) Neither Richton nor Mayraz teach, disclose or suggest storing positional information for a record as a geocoding index in local memory, wherein the record is in an external database; and
- (4) Neither Richton nor Mayraz teach, disclose or suggest storing a foreign key with positional information, in local memory, for an external database record.

Independent claims 1, 15, and 27 are generally directed to location enabling a user's profile information in an external database. As stated in the specification, user profiles may be stored in an external database that may not be completely accessible or that one may not want to transfer into local memory. However, access to such an external database is still useful. To provide such access, a compact definition of a schema for the external database is stored in local memory. In addition, data source information that describes how to connect and communicate with the external database is stored in local memory. An SQL statement is also stored in local memory, where the SQL statement (upon execution) extracts properties from the external database corresponding to the compact definition. To location enable the records in the external database, a foreign key that identifies a record in the external database is stored locally. Further, positional information (in the form of a geocoding index) is stored in local memory for the record identified by the foreign key. Accordingly, based on the claims, the local memory contains a schema definition, data source information, an SQL statement, a foreign key, and positional information for each foreign key. Using each of the stored elements, the invention provides access to the externally stored user profile information.

The cited references do not teach nor suggest these various elements of Applicants' independent claims.

The Office Action relies on Richton to teach various claim elements. Firstly, the Office Action equates the compact definition of a schema to Richton's "simple commands", the external database to Richton's location based preference server, and the user's profile information to the preferences users in col. 3, lines 23-27. Applicants respectfully traverse such a suggestion.

Applicants submit that Richton's simple commands are not even remotely similar to a schema or a compact definition of a schema, implicitly or explicitly. Recent case law varies on whether the specification or dictionary definition prevails when defining a claim term. However, Applicants submit that whether a dictionary definition or the specification is used, Richton still fails to teach the claimed schema. Paragraphs [0062]-[0064] of the present specification specifically define the claimed schema and compact definition:

[0002] FIG. 5 illustrates the structure of a schema 134 for an external database 128-130 in accordance with one or more embodiments of the invention. As described above, the schema definition 134 maintains information about external data sources 128-130. Each schema 134 definition stored by the LBS application 110 provides a description for each object in the external database 128-130. In other words, there is a corresponding schema 134 for each object in the external database 128-130. For example, an address object in the external database 128-130 will have a corresponding schema definition 134. Further, for each field/attribute in the object, a corresponding attribute definition 502 is stored with the schema 134. For example, the address object has multiple fields/attributes such as name, number, street name, city, state, and zip. For each field/attribute, a schema attribute definition 502 is stored with the schema 134.

[0003] The type of database 504 (i.e., itemType : String; e.g., Address) in the schema 134 provides the type or a name for the object in the external database 128-130. Data source information 506 (i.e., jdbcDataSource : String) provides information regarding how to connect and communicate with the external database 128-130. Such information may fully define where the data is, including its database 128-130, its row, and its column. For example, information regarding which carrier 126 is hosting a particular database 128-130 and how to communicate with the database 128-130 is stored.

[0004] As described above, a list 508 of attributes is set forth in the schema 134. For each attribute, an attribute definition 502 provides the name of the attribute, the type of attribute and a constraint of the attribute. Thus, for each schema 134, a single list 508 maps to multiple attribute definitions 502.

As set forth in the above language, the schema definition "maintains information about external data sources" and "provides a description for each object in the external database". Thus, a schema definition as set forth in the specification provides information about the claimed external database and a description of objects in the external database.

The dictionary (<http://www.techweb.com/encyclopedia/defineterm?term=schema>) defines a schema as follows:

**schema**

Pronounced "skee-mah." The definition of an entire database. It defines the structure and the type of contents that each data element within the structure can contain. Schemas are often designed with visual modeling tools that automatically create the SQL code necessary to define the table structures. See subschema and XML schema.

Under the dictionary definition, a schema defines a database including the structure and type of contents that each data element within the structure can contain.

Thus, the dictionary is consistent with the specification in terms of the definition of the term "schema". The Office Action provides that the compact definition of a schema is equivalent to "simple commands". However, as can be seen by the above definitions, "simple commands" do not provide a structure for the contents of a database, nor do "simple commands" provide information about external datasources. Instead, as set forth in Richton, "simple commands" are merely transmitted to a wireless mobile unit (see col. 3, lines 39-42). Such "simple commands" are not even remotely similar, nor do they describe, teach, suggest, or allude to such structure or information. In this regard, a command delivered to a wireless device does not provide any information about an external database.

The Office Action is also confusing the terminology used in the claims, using Richton's terminology inconsistently, and applying Richton's terminology to the claims in a manner that is not possible. The Office Action provides that the schema is equivalent to the simple commands, the external database is equivalent to location based preferences server 305, and the claimed user's profile information is equivalent to the preferences users described in col. 3, lines 23-27. The Office Action then provides that the claimed storage (in local memory) of data source information that describes how to connect and communicate with an external database is equivalent to the location based preferences server translating and cooperating with the location based service database "to permit simple commands to be transmitted to". As claimed, the data source information describes how to connect and communicate with an external database. The cited claim language leaves off the end of the sentence that clearly differentiates the cited portion from the claim limitations. Specifically, the location based preferences server translates and cooperates with the location based service data base to permit simple commands "to be transmitted to the wireless mobile unit 201".

Thus, while the claims provide for information regarding how to communicate with an external database, Richton merely describes how to send commands to a wireless mobile unit. Such a wireless mobile unit is not equivalent or even remotely similar to the claimed external database. In fact, Richton's FIG. 2 and 3 clearly illustrate that the wireless mobile unit and location based services database are different. Based on the language in the Office Action, if the external database is equivalent to the location based service database (or the location based preference server), it cannot also be equivalent to the wireless mobile unit.

The claims further provide for storing, in the local memory, positional information, for the record in the external database. In rejecting this element, the Office Action merely recited col. 4, lines 15-27. However, col. 4, lines 15-27 merely indicates that the location based service database (that includes the instruction information, position information, remote location info, etc. (see col. 3, lines 11-22)) contains GIS processing software. The earlier portion of the Office Action provides that the external database is equivalent to the location based preferences server and location based service database. Now, the Office Action is stating that the positional information is stored in the location based service database (i.e., the same database). However, the claims clearly provide that the positional information (that is for a record in the external database) is stored in local memory as a geocoding index. For example, prior claim 16 (which has not been amended) clearly established that the positional information is stored in the LBS database for the record located in the external database. Thus, the claims provide for storing the positional information (for a record in an external database) in a local database or memory. Richton merely illustrates that positional information can be stored in the same database as the other described information. Such a similar database does not remotely suggest or allude to the storage of positional information in either local memory, or an LBS database that is distinguishable from the external database as set forth in the claims.

The claims further provide for providing access to the user's profile information (that is stored in the external database) using (1) the stored compact definition; (2) the data source information; (3) the SQL statement; (4) the foreign key; and (5) the positional information. The rejection breaks up the single claim element and relies on Richton to teach providing access based on items (1), (2), and (5), while ignoring the other elements. In fact, the Office Action never relies on any art nor addresses the specifically claimed limitations of providing access using the foreign key and SQL statement. Applicants note that it is improper to break up the claim element as done in the

Office Action. In this regard, the claim must be examined as a whole. Under MPEP §2142, the claimed invention must be examined as a whole and whether the “whole” claimed invention would have been obvious at the time of invention. The claims recite a method step for providing access based on various specific attributes together. By breaking up the elements that are relied upon when applying the prior art, the Office Action is not examining the claims or individual elements “as a whole” as required under MPEP §2142.

Additionally, specifically claimed limitations (e.g., providing access based on the SQL statement and foreign key) cannot merely be ignored. For example, under MPEP §2142 and 2143.03 “To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).” Accordingly, the Office Action’s failure to address the providing access method step that uses the SQL statement and foreign key is contrary to accepted PTO practices.

The claims also provide for storing an SQL statement that, upon execution, extracts properties from an external database corresponding to the compact definition. In other words, the SQL statement itself is stored in the local memory (in claim 1) that if and when it is executed will extract properties from the external database. The Office Action admits that Richton fails to teach this claim element. Instead, the Office Action relies on Maytaz paragraph 0163 which provides:

[0163] At step S20, control 124 analyses the database contents to determine those users which have user profile data that complies with the target profile attached to the message. Determination of which user profiles match the target profile is implemented by a conventional database querying procedure employing Structural Query Language (SQL), since all the criteria described above can be determined on a yes/no basis. Even in the case of location, the above described form of the place name hierarchy enables verification of matching when place names are included in the target profile. A further possibility is for the target profile to specify that recipients of the message should be located within a given distance from the location of the message sender, or even from a particular other place. In this situation, in order for the standard database query procedure to be implemented, the following procedure is first carried out by control 124. Control 124 determines the square distance of each user from the message sender by analysing the UMC data held for each user. Preferably however, the number of users this needs to be performed with is significantly reduced by identifying the particular area within the area hierarchy structure 168 that is the smallest area in which the distance criteria can be met. The square distance calculation need then only be performed for those users who contain that area within their user profile. Another possibility when target profile contains a maximum distance is to treat this as only being so specific as to allow server 2 to define all users within whichever is the smallest hierarchical level of the area hierarchy structure which allows all distances under the distance criteria to be included, even if some in fact would be found to be beyond it with an individual calculation of the square distance. Whether the location details should be matched before other

details, or indeed the choice of which order any of the other profile details should be compared in is determined according to the requirements of the particular system under consideration.

As can be seen, Mayraz merely provides for determining which user profiles match a target profile using SQL. However, an SQL statement is not stored (for later use to extract properties from an external database). Additionally, the SQL statement merely compares a user profile to a target profile. There is no description, implicit or explicit, that Mayraz' SQL statement extracts properties from an external database. In fact, Applicants submit that Mayraz fails to teach the claimed external database or the compact definition. Without teaching the claimed external database or compact definition of the database, Mayraz cannot possibly teach extracting information from the external database corresponding to the compact definition.

The claims specifically recite storing, in local memory, a foreign key that identifies a record in the external database. Thereafter, positional information for the record (identified by the foreign key) is also stored in local memory, as a geocoding index. Thus, as claimed, for each foreign key, positional information and the foreign key are stored in local memory (claim 1) or an LBS database (claim 15) that is separately identified from the external database. In rejecting the foreign key claim element, the Office Action relies on paragraphs 0149-0152. However, these paragraphs merely describe a user table that is linked to a user contact table (and not separate databases) via the user ID. Accordingly, instead of storing a foreign key with positional information (as claimed), Mayraz merely describes a prior art relational database system where tables may be linked via a common field (i.e., the user ID). Such a teaching in Mayraz does not and cannot teach, implicitly or explicitly, the specifically claimed foreign key and positional information storage for the record identified by the foreign key. Again, Mayraz fails to describe the external database, foreign key, and positional information as set forth in the claims. Further, these claims cannot be dissected and examined independently from each other. Instead, the claim must be examined as a whole including the relationship between the claim elements. The Office Action fails to reject the claims in this manner. Additionally, neither Richton, nor Mayraz, either alone or in combination, teach, disclose, or suggest the invention as claimed.

Moreover, the various elements of Applicants' claimed invention together provide operational advantages over Richton and Mayraz. For example, neither Richton nor Mayraz

location enable an external database as claimed. In addition, Applicants' invention solves problems not recognized by Richton and Mayraz.

Thus, Applicants submit that independent claims 1, 15, and 27 are allowable over Richton and Mayraz. Further, dependent claims 2-14, 16-26, and 28-40 are submitted to be allowable over Richton and Mayraz in the same manner, because they are dependent on independent claims 1, 15, and 27, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-14, 16-26, and 28-40 recite additional novel elements not shown by Richton and Mayraz.

#### IV. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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